

- b) calculating a set of instantaneous amplitudes and frequencies for said first selected horizon;
- c) determining the average amplitude and frequency of said set of instantaneous amplitudes and frequencies;
- d) identifying pressure gradients associated with said instantaneous amplitudes and frequencies to generate a pressure gradient map, said pressure gradients corresponding to points at which said instantaneous amplitudes and frequencies vary from said average amplitude and frequency, wherein points at which said instantaneous amplitudes and frequencies are less than said average amplitude and frequency correspond to locations of relatively low pressure.

3 (once amended). The method of claim 1 [2] wherein said first selected horizon has associated traveltimes, and wherein said instantaneous amplitudes and frequencies are calculated by the Hilbert transformation using said traveltimes.

Remarks

Amendments to the Claims

The Examiner has indicated that claim 1 would likely be rejected as being indefinite under 35 U.S.C. § 112, but that the claim might be allowable if amended to include the limitations of claim 2. Accordingly, claim 1 has amended to include all of the limitations of claim 2 in order to put the claim in an allowable form. Claim 2 has been cancelled, and claim 3 has been amended to depend now from claim 1 (where claim 3 previously depended from claim 2).

The Applicants respectfully request that the claims now be allowed.

(Continued on next page.)

1 Copies of References

2 The Examiner has requested copies of the references cited in the Background
3 section of the application (specifically, "Friction of Rocks", *Pure Applied Geophysics*,
4 116 (1978), pp. 615-626, by J. D. Byerlee, and *Mechanics of Incremental*
5 *Deformations*, by M. A. Biot, New York, 1965). The Applicants' attorney has requested
6 a copy of these references from the Applicants. However, the person who has the
7 references is currently traveling outside of the country, and will be unable to access the
8 references until mid-February, 2002. As soon as the Applicants' attorney obtains a
9 copy of the references, they will be submitted in an Information Disclosure Statement.

10

11 The Drawings

12 The Examiner has indicated that a Petition to accept color drawings needs to
13 be submitted, and that another set of the color drawings needs to be submitted. The
14 Applicants intend to comply, but wish to first resolve another issue pertaining to Figs.
15 3, 4B and 5 (the color drawings).

16 The Examiner has also indicated that Figs. 1-5, which were in the parent
17 application, should be identified as "prior art". The Applicants respectfully disagree.
18 The Applicants have looked in the MPEP and 37 C.F.R. but have been unable to find
19 any authority for such labeling. The Applicants do not wish to label the indicated
20 drawings as "prior art" because of the estoppel effect it will have in the event of a
21 reissue application, or even the present application. The drawings are not described
22 in the application as depicting "prior art". In fact, certain of the steps depicted in
23 Figs. 1-5 are performed in the claimed invention. The mere fact that the same
24 drawings were included in the parent application does not make them "prior art" for
25 the purposes of the invention claimed in the present application. The Applicants
therefore respectfully request that the Examiner either cite to the rule which requires
the drawings to be so labeled, or withdraw the request. Once this matter is resolved,

1 the Applicants will submit the additional set of color drawings and the petition to
2 accept color drawings. The Applicants do not want risk having to make two different
3 submissions of drawings in the event that the matter is resolved one way or the
4 other.

5 The Examiner has also asked that amended drawings for Figs. 6 through 8 be
6 submitted, labeling the numbered "blocks" in those drawings. The Applicants
7 respectfully disagree that amended drawings are required for the following reasons.

8 The "blocks" shown in Figs. 6-8 are not the type of "rectangular boxes"
9 referred to in 37 C.F.R. § 1.83(a) for "conventional features disclosed in the
10 specification . . . where their detailed illustration is not essential for a proper
11 understanding of the invention", and therefore do not need to be labeled. Further,
12 while 37 C.F.R. § 1.84(o) provides that "suitable descriptive legends may be used
13 subject to approval by the Office, or may be required by the examiner where
14 necessary for understanding of the drawing", the Applicants believe such is not the
15 case here.

16 Specifically, in Fig. 6 the "blocks" which are numbered 61, 62 and 63 are
17 described in the specification at page 27, lines 5-7 as "three formation units 61, 62
18 and 63 of low level (B_L), and each formation unit represents a layer composed of
19 elementary blocks." Further, at page 7, lines 21-22, figure 6 is described as follows:
20 "FIG. 6 depicts a three-layer model of the medium of a subterranean formation having
21 discrete structure." That is, Fig. 6 depicts a model of layers of rock. This is not the
22 type of item which needs to be further labeled on the drawing.

23 With respect to Fig. 7, items 71 and 72 shown in the figures are clearly
24 graphs, and represent pressure gradients at various angles " φ " (see page 30, lines
25 10-14). The graphs 71 and 72 have been properly provided with labeled axes in
accordance with 37 C.F.R. § 1.84(d), the axes have been identified by symbols, as

permitted by 37 C.F.R. § 1.94(n), and the symbols are described in the specification.

The Applicants therefore believe that no additional labeling is required in Fig. 7.

With respect to Fig. 8, blocks 81, 82, 83 and 84 are identified by symbols (Pd, C/ μ , C/ μ , and Vx; Vy) as permitted by 37 C.F.R. § 1.94(n), and the symbols are described in the specification (see page 34, lines 9-16). The Applicants therefore believe that no additional labeling is required in Fig. 8.

7 The Applicants therefore respectfully request the Examiner to accept the
8 drawings as-is, with the exception that the Applicants will provide another set of the
9 color drawings along with a petition to accept color drawings in the case.

Summary

With the exception that the Applicants will provide another set of the color drawings along with a petition to accept color drawings in the case, and will attempt to locate and forward to the Examiner a copy of the references cited in the "Background" section, the Applicants believe that the case is otherwise in condition for allowance, and respectfully request the same.

Respectfully submitted,

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